MARGINAL BANK EN

API DOCUMENTATION

VERSION 2

MARGINAL BANK EN

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CHANGELOG

Date	API version	Description
20240423	2	The usage of the authentication type MobileBankId has been updated.
20240423	2	The authorisation process for the authentication type MobileBankIdOnOtherDevice has been updated.
20240423	2	The property startAuthorisationWithAutoStartToken has been added to the _links property.
20240423	2	The usage of the challengeData property imageLink has been updated.
20240423	2	The header TPP-Explicit-Authorisation-Preferred must be set to true when used.
20240610	2	Change of provider for contingency mechanism.
20240610	2	PSU name returned in details field for accounts and card-accounts.

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DEDICATED INTERFACE FOR CONSUMER ACCOUNTS - API EXAMPLES

1 SIGNING REQUESTS

To ensure that the requests will not be tampered with during transit, the application needs to sign it. Signing requests is described step by step below. You will need to obtain a certificate from one of the Qualified Trust Service Providers. These can be found on this link. For the Sandbox environment you will need to download the certificate from the Developer portal. It is recommended to first use the certificate on Sandbox environment for developing the application.

1.1 SIGNING THE CERTIFICATE

Once you generate an API Key on the Developer portal and create a Sandbox you can download the certificate.

1.2 CREATING THE DIGEST

The Digest is a base64 encoded hash of the body: Base64(SHA-512(body))

- Take the body of your request or an empty string if there is no body.
- Pass the body through the SHA-512 hashing algorithm (SHA-256 is also allowed).
- Make sure the hashed output is binary. In other words; do not convert it to a string.
- Base64 encode the output.
- Add the result to your digest header and make sure that you declare which hashing algorithm you have used

An example of the digest header for an empty body using SHA-256 or SHA-512:

Digest: sha-256=47DEQpj8HBSa+/TImW+5JCeuQeRkm5NMpJWZG3hSuFU=

Digest: sha-512=z4PhNX7vuL3xVChQ1m2AB9Yg5AULVxXcg/SpIdNs6c5H0NE8XYXysP+DGNKHfuwvY7kxvUdBeoGlODJ6+SfaPg==

1.3 CREATE THE SIGNING STRING

The signing string contains several headers depending on which API you are using, separated by line breaks. The order is not important as long as you define them in the same order in the signature header.

For example:

Digest: sha-512=z4PhNX7vuL3xVChQ1m2AB9Yg5AULVxXcg/SpIdNs6c5H0NE8XYXysP+DGNKHfuwvY7kxvUdBeoGlODJ6+SfaPg==

X-Request-ID: 13e25ec7-2251-4a2d-a5cd-035e0c46dd6b

PSU-ID: 196404015510

Date: Sun, 01 May 2019 15:02:37 GMT

There also may be included other headers that were not in the example. As per Berlin Group the following headers are mandatory and must be included:

- ”Digest”
- ”X-Request-ID”,
- ”PSU-ID” (if and only if ”PSU-ID” is included as a header of the HTTP-Request).
- ~~”PSU-Corporate-ID” (if and only if ”PSU-Corporate-ID” is included as a header of the HTTPRequest).~~ *This is striked out as it is N/A for this version of our PSD2 API. For access to corporate accounts see “CONTINGENCY MECHANISM AND CORPORATE ACCOUNTS”*
- ”Date”

1.4 SIGN WITH YOUR PRIVATE KEY

The signature is the signing string signed with the private key: Base64(RSA-SHA512(signing_string))

- Create the signing string (see step 1.2).
- Sign it using RSA-SHA512 (RSA-SHA256 is also allowed) and the private key of the signing certificate.
- Base64 encode the output.

An example of the signature using the above information would look like this:

xKYphLjoKeRB8MhfPdgJJjGJ18JQaqqBHrYJPGh1yXGeMCdkj3Xs1RxdAs5P4kFYkgB6OnqNft3Zuo
Pyku2P+gWLW4gjJ5QT3T8WXVQjQIk9VtsRK+vHQvemMKXE5nUYRFsiuM909Sk9cXiWukumJYkw
OZqxxUqBLaRn3vBVHm+azUJRL6bhlYoCG8QM5ws+u1E8c+d3UA5xbBRyVJPY+//WiVoJGANz2XuI
lb0zDRxEPIHv3jl6p/Tjyr7e+jRGyYwKRAwF2w3Z87VFkxG7bJQ33NH5VD5WWQHTA358GrLm03iqf
m8V6jbMZtl+UjiXOpKz8kRS5WhShQ8Sim9q3A==

1.5 SIGNATURE HEADER

The signature header consists of the following components:

Component	Description
keyId	The serial number of the certificate as defined in ’TPP-Signature-Certificate’ header, the format should be Integer
algorithm	Specify which algorithm was used when generating the signature: rsa-sha512 or rsasha256.
headers	The list of headers contained in the signature: • lowercase • separated by a space • in the same order as they have in the signing string
Signature	The resulting signature string from step 1.3.

Finally, the resulting signature header for the example would be: signature:
keyId=”1234567890123456789”,algorithm=”rsa-sha256”,headers=”digest x-request-id psu-id date”,signature=”xKYphLjoKeRB8MhfPdgJJjGJ18JQaqqBHrYJPGh1yXGeMCdkj3Xs1RxdAs5P4kFYk
gB6OnqNft3ZuoPyku2P+gWLW4gjJ5QT3T8WXVQjQIk9VtsRK+vHQvemMKXE5nUYRFsiuM909Sk9c
XiWukumJYkwOZqxxUqBLaRn3vBVHm+azUJRL6bhlYoCG8QM5ws+u1E8c+d3UA5xbBRyVJPY+//W
iVoJGANz2XuIlb0zDRxEPIHv3jl6p/Tjyr7e+jRGyYwKRAwF2w3Z87VFkxG7bJQ33NH5VD5WWQHTA
358GrLm03iqfm8V6jbMZtl+UjiXOp Kz8kRS5WhShQ8Sim9q3A==”

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2 GENERATE ACCESS TOKEN

This is an example of how to generate an access token which is needed for authorization in the sandbox environment. To generate an access token a client secret and an API key is needed which would have been generated through the application registration on the Developer Portal. The method used to generate a token which is returned in the response body is POST at: https://api-sandbox.openbanking.marginalen.se/connect/token

HTTP request header

Attribute	Type	Description
Content-Type		application/x-www-form-urlencoded

Request body in the form of key: value:

Key	Value
client_id	5341d37ff0f202588541441a93cf0c72
grant_type	client_credentials
client_secret	b4b19762356d4c3ebba777b6103acce0
scope	aisp pisp piisp

Request parameters description:

Key	Type	Description
client_id	string	The client_id of the TPP (i.e. API key value).
client_secret	string	The client_secret obtained in application registration.
grant_type	string	client_credentials grant type
scope	string	Defines the scope of access. Possible values: pisp, aisp and piisp

Response body:


```
{
    ”access_token”: ”d0ec9ec7816456722d602f0cfced5821fea515eeeff8e3ea7391e82baa865ebe”,
    ”expires_in”: 2592000,
    ”token_type”: ”Bearer”
}
```


Response parameters description:

Key	Type	Description
access_token	string	The access token needed for authorization.
expires_in	integer	The access token needed for authorization.
token_type	string	The token type is Bearer token.

3 BANKID

3.1 SIGNING WITH BANKID

Signing consents and payments can be done using the BankID app, either installed on the same device by sending MobileBankId as the authentication method in the request or on another device by specifying MobileBankIdOnOtherDevice. These scenarios are described below.

3.1.1 MobileBankId

When signing is initiated using the authentication method MobileBankId, a link will be given with an auto start token in the property startAuthorisationWithAutoStartToken. This property can be found in the _links property. Directing the PSU to this URL will automatically start the BankID app for signing, on the same mobile device that is used. This URL can differ slightly depending on the device used and the preferences of the TPP. Therefore, the TPP can customize the URL using the auto start token in the given URL according the BankID guidelines: https://www.bankid.com/utvecklare/guider/teknisk-integrationsguide/programstart.

3.1.2 MobileBankIdOnOtherDevice

When signing is initiated using the authentication method MobileBankIdOnOtherDevice, a link will be given in the imageLink property. This property can be found in the challengeData. By sending a GET request to this URL, a QR code will be provided as response. This QR code is to be shown to the PSU for them to scan using their BankID app to finalize the signing process in the BankID app. This QR code is to be updated repeatedly (read more about animated QR codes for BankID here: https://www.bankid.com/utvecklare/guider/teknisk-integrationsguide/qrkoder) by calling the same URL for as long as the session is valid (meaning as long as the status is pending in the status response).

3.2 USING BANKID TEST APPLICATION FOR SIGNING CONSENTS AND PAYMENTS

Signing consents and payments in the Sandbox environment is possible using the BankID test application. You will need to install this application and generate a BankID with the PSU IDs used in the sandbox generation. Please refer to the following links for detailed information on installing the application and obtaining a BankID:

- https://www.bankid.com/bankid-i-dina-tjanster/rp-info
- https://demo.bankid.com/

4 CONSENTS ENDPOINT EXAMPLES

4.1 CREATE CONSENT REQUEST

In order to be able to create consent a generated sandbox and an access token is needed (section 2 describes how to obtain an access token). The following example explains how to create a consent for all accounts for a given PSU (i.e. customer's SSN generated when sandbox is generated). The chosen SCA approach in this example is explicit decoupled.

4.1.1 REQUEST

METHOD

The method is POST at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents

HEADERS

Attribute	Type	Description
Content-Type		application/json

Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party
PSU-ID	string	Client ID of the PSU at Marginalen Bank client interface.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

Additional HTTP request parameter for creating a consent is needed which defines the authorisation preference for the create consent request.

Attribute	Type	Description
TPP-Explicit-Authorisation-Preferred	boolean	If it equals ”true”, the TPP prefers to start the authorisation process separately. If it equals ”false” or if the parameter is not used, there is no preference of the TPP. This especially indicates that the TPP assumes a direct authorisation of the transaction in the next step. Currently, “true” is the only supported value.

PARAMETERS

Name	Parameter of	Type	Description
access		object	Requested access services for the consent.
allPsd2	access	string	Request access for all available accounts of the PSU on all PSD2 related account information services
recurringIndicator		boolean	If the consent is for recurring access to the account data, this attribute is set to true
validUntil		string	Validity date of the consent.
frequencyPerDay		integer	Defines maximum frequency for an access per day
combinedServiceIndicator		boolean	Indicates that a payment initiation service will be addressed in the same ”session”.

EXAMPLE

In the example, TPP-Explicit-Authorisation-Preferred is set to “true”, implying explicit decoupled SCA approach:

Request body:

```
{
  ”access”: {
    ”allPsd2”: ”AllAccounts”
  },
```

```
  "recurringIndicator": true,
  "frequencyPerDay":100,
  "validUntil": "2019-10-10T11:00:00.583Z",
  "combinedServiceIndicator": true
}
```


4.1.2 Response

HEADERS

Attribute	Type	Description
Location	string	Location of the created resource.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
ASPSP-SCA-Approach	string	Possible values: DECOUPLED

PARAMETERS

Name	Parameter of	Type	Description
consentStatus		string	Status of the consent.
consentId		string	ID of the corresponding consent object.
_links		object	A list of hyperlinks to be recognised by the TPP.
self	_links	string	The link to the consent resource created by this request. This link can be used to retrieve the resource data.
status	_links	string	The link to retrieve the status of the account information consent.
startAuthorisationWithPsuIdentification	_links	string	The link to the authorisation endpoint, where the authorisation sub-resource has to be generated while uploading the PSU identification data.

EXAMPLE

Response body:


```
{
  "consentStatus": "received",
  "consentId": "1435dac42f2c4e90833f1265306f8390",
  "_links": {
    "startAuthorisationWithPsuIdentification": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/1435dac42f2c4e90833f1265306f8390/authorisations",
    "self": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/1435dac42f2c4e90833f1265306f8390",
    "status": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/1435dac42f2c4e90833f1265306f8390/status"
  }
}
```


4.2 START THE AUTHORISATION PROCESS FOR A CONSENT

This example creates an authorisation sub-resource and starts the authorisation process for the consent object created in the previous example.

4.2.1 REQUEST

METHOD

The method is POST with empty body at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/{consentId}/authorisations

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party
PSU-ID	string	Client ID of the PSU at Marginalen Bank client interface.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

4.2.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
ASPSP-SCA-Approach	string	Possible values: DECOUPLED

PARAMETERS

Attribute	Parameter of	Type	Description
scaStatus		string	The status of the SCA routine.
scaMethods		array of authentication objects	An array of possible methods for SCA
authenticationType	scaMethods array	string	An array of possible methods for SCA.
authenticationVersion	scaMethods array	string	Depending on the ”authenticationType”. This version can be used by differentiating authentication tools used within performing OTP generation in the same authentication type.
authenticationMethodId	scaMethods array	string	An identification provided by Marginalen Bank for the later identification of the authentication method selection.
name	scaMethods array	string	This is the name of the authentication method defined by the PSU in the Online Banking frontend of Marginalen Bank.

explanation	scaMethods array	string	Detailed information about the SCA method for the PSU
_links		object	A list of hyperlinks to be recognised by the TPP.
selectAuthenticationMethod	_links	string	The link to the authorisation sub-resource, where the selected authentication method needs to be updated.
scaStatus	_links	string	The link to retrieve the scaStatus of the corresponding authorisation sub-resource.
authorisationId		string	Unique resource identification of the created authorisation sub-resource.

EXAMPLE
Response body:


```
{
  ”scaStatus”: ”psuIdentified”,
  ”scaMethods”: [
  {
    ”authenticationType”: ”MobileBankId”,
    ”authenticationVersion”: ”MobileBankId.2”,
    ”authenticationMethodId”: ”MobileBankId2”,
    ”name”: ”MobileBankId2”,
    ”explanation”: ”An SCA method, where the PSU will be redirected to a mobile BankID application on same device to approve the authorisation. To redirect the PSU to their BankID application, the link startAuthorisationWithAutoStartToken is to be used. This link can be found in the _links property.”
  },
  {
    ”authenticationType”: ”MobileBankIdOnOtherDevice”,
    ”authenticationVersion”: ”MobileBankIdOnOtherDevice.2”,
    ”authenticationMethodId”: ”MobileBankIdOnOtherDevice2”,
    ”name”: ”MobileBankIdOnOtherDevice2”,
    ”explanation”: ”An SCA method, decoupled, where the PSU will need to open the mobile BankID application manually and scan a QR code to approve the authorisation. The QR code can be retrieved from the imageLink in the challengeData property.”
  }
  ],
  ”_links”: {
    ”scaStatus”: ”https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/1435dac42f2c4e90833f1265306f8390/authorisations/5d89dd771b42612a37ed65db”,
    ”selectAuthenticationMethod”: ”https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/1435dac42f2c4e90833f1265306f8390/authorisations/5d89dd771b42612a37ed65db”
  },
  ”authorisationId”: ”5d89dd771b42612a37ed65db”
}
```

4.3 UPDATE PSU DATA FOR CONSENTS

This example updates PSU data of the consent's resource. After sending this call, the next step would be for the PSU to sign the request using the BankID application on their mobile device. See details regarding the signing flow in section 3. After signing the consent request the consent's status should change to "valid".

4.3.1 REQUEST

METHOD

The method is PUT at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/{consentId}/authorisations/{authorisationId}

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party
PSU-ID	string	Client ID of the PSU at Marginalen Bank client interface.
Digest	string	Is contained if and only if the "Signature" element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

PARAMETERS

Name	Type	Description
authenticationMethodId	string	An identification provided by Marginalen Bank for the later identification of the authentication method selection.

EXAMPLE

```
{
  "authenticationMethodId": "MobileBankId2"
}
```

4.3.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
ASPSP-SCA-Approach	string	Possible values: DECOUPLED

PARAMETERS

Name	Parameter of	Type	Description
_links		object	A list of hyperlinks to be recognised by the TPP.
scaStatus	_links	string	The link to retrieve the scaStatus of the corresponding authorisation sub-resource.

startAuthorisationWithAutoStartToken	_links	string	The link to start the BankID application on the same device for approving the authorisation when the chosen SCA method is MobileBankId.
scaStatus		string	The status of the SCA routine.
psuMessage		string	Text to be displayed to the PSU.
chosenScaMethod		object	The chosen SCA method as sent in the request body in the call.

EXAMPLE

{
"chosenScaMethod": {
"authenticationType": "MobileBankId",
"authenticationVersion": "MobileBankId.2",
"authenticationMethodId": "MobileBankId2",
"name": "MobileBankId2",
"explanation": "An SCA method, where the PSU will be redirected to a mobile BankID application on same device to approve the authorisation. To redirect the PSU to their BankID application, the link startAuthorisationWithAutoStartToken is to be used. This link can be found in the _links property."
},
"_links": {
"scaStatus": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/1435dac42f2c4e90833f1265306f8390/authorisations/ 5d89dd771b42612a37ed65db",
"startAuthorisationWithAutoStartToken": "bankid:///?autostarttoken=3ef3d65d-0a07-4c6c-b2db-4269ef620cca&redirect=null"
},
"scaStatus": "Started",
"psuMessage": "Försöker starta BankID-appen."
}

4.4 READ THE SCA STATUS OF THE CONSENT AUTHORISATION

This example returns the SCA status of a consent initiation's authorisation sub-resource.

4.4.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/{consentId}/authorisations/{authorisationId}

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party
Digest	string	Is contained if and only if the "Signature" element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.

TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

4.4.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Type	Description
scaStatus	string	The status of the SCA routine.

EXAMPLE

```
{
   ”scaStatus”: ”Finalised”
}
```

4.5 GET CONSENT REQUEST

This example returns detailed information about the consent object.

4.5.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/{consentId}

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

4.5.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Attribute	Parameter of	Type	Description

access		object	Requested access services for the consent.
accounts	access	list	List of accounts with detailed account information for which an access is granted.
balances	access	list	List of accounts with balances information for which an access is granted.
transactions	access	list	List of accounts with transactions information for which an access is granted.
availableAccounts	access	string	Request access to basic accounts' information for all accounts of the PSU on all PSD2 related account information services.
availableAccountsWithBalance	access	string	Request access to accounts with balances for all accounts of the PSU on all PSD2 related account information services.
allPsd2	access	string	Request access for all available accounts of the PSU on all PSD2 related account information services.
recurringIndicator		boolean	If the consent is for recurring access to the account data, this attribute is set to "true".
validUntil		string	Validity date of the consent.
frequencyPerDay		integer	Defines maximum frequency for an access per day.
lastActionDate		string	Date of last action on the consent object.
consentStatus		string	Status of the consent.

EXAMPLE


```
{
   ”access”: {
      ”accounts”: [],
       ”balances”: [],
      ”transactions”: [],
      ”allPsd2”: ”allAccounts”
   },
   ”recurringIndicator”: true,
   ”validUntil”: ”2019-10-10T11: 00:00.583Z”,
   ”frequencyPerDay”: 100,
   ”lastActionDate”: ”2019-09-24T08:49:18.361Z”,
   ”consentStatus”: ”valid”
}
```


4.6 DELETE CONSENT REQUEST

This example deletes a consent object. Deleting a consent sets the status to "terminatedByTpp" and this consent object can no longer be used (consent expired).

4.6.1 REQUEST

METHOD

The method is DELETE at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/{consentId}

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

4.6.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

4.7 GET CONSENT STATUS REQUEST

Once the consent is generated and confirmed on Consent Manager, now the status of the consent should be changed from “received” to “valid”. This example checks the consent’s resource status.

4.7.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents/{consentId}/status

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

4.7.2 RESPONSE

HEADERS

Attribute	Type	Description

X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Type	Description
consent	string	Status of the consent.

EXAMPLE

```
{
   ”consentStatus”: ”valid”
}
```

4.8 CREATING CONSENT FOR A SPECIFIC LIST OF ACCOUNTS

This example grants access to dedicated accounts’ balances and transactions.

4.8.1 REQUEST

METHOD

The method is POST at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/consents

PARAMETERS

Name	Parameter of	Type	Description
access		object	Requested access services for the consent.
accounts	access	list	List of accounts with detailed account information for which an access is granted.
balances	access	list	List of accounts with balances information for which an access is granted.
transactions	access	list	List of accounts with transactions information for which an access is granted.
bban		string	Basic Bank Account Number (BBAN) Identifier.
availableAccounts		string	Request access to basic accounts’ information for all accounts of the PSU on all PSD2 related account information services.
availableAccountsWithBalance		string	Request access to accounts with balances for all accounts of the PSU on all PSD2 related account information services.
allPsd2		string	Request access for all available accounts of the PSU on all PSD2 related account information services
recurringIndicator		boolean	If the consent is for recurring access to the account data, this attribute is set to true
validUntil		string	Validity date of the consent.
frequencyPerDay		integer	Defines maximum frequency for an access per day

combinedServiceIndicator	boolean	Indicates that a payment initiation service will be addressed in the same ”session”.

EXAMPLE


```
{
  ”access”: {
    ”accounts”: [
      {
        ”bban”: ”92384036254”
      }
    ],
    ”balances”: [
      {
        ”bban”: ”92350752216”
      }
    ],
    ”transactions”: [
      {
        ”bban”: ”92361758679”
      }
    ]
  },
  ”recurringIndicator”: true,
  ”frequencyPerDay”: 100,
  ”validUntil”: ”2019-10-10T11:00:00.583Z”,
  ”combinedServiceIndicator”: true
}
```


5 ACCOUNTS ENDPOINT EXAMPLES

5.1 READ ACCOUNT LIST REQUEST

This example returns a list of all accounts for which a consent is granted.

5.1.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts. An optional query parameter “withBalance” can be added which if set to “true” returns the balances of the accounts for which such consent is given.

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Consent-Id	string	ID of the corresponding consent object.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.

Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

5.1.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Parameter of	Type	Description
accounts		list	List of accounts.
resourceId	accounts	string	Data element used in the path when retrieving data from a dedicated account.
iban	accounts	string	International Bank Account Number.
bban	accounts	string	Basic Bank Account Number.
currency	accounts	string	Account currency.
name	accounts	string	Name of the account given by the bank or the PSU in Online-Banking.
product	accounts	string	Product Name of the Bank for this account, proprietary definition.
status	accounts	string	Account status.
bic	accounts	string	The BIC associated to the account.
usage	accounts	string	Specifies the usage of the account.
details	accounts	string	PSU name - the name of the PSU that initiated the request through the TPP
balances	accounts	list	A list of balances regarding this account.
_links	accounts	object	Links to the account, which can be directly used for retrieving account information from this dedicated account.

EXAMPLE


```
{
  ”accounts”: [
    {
      ”resourceId”: ”92384036254”,
      ”iban”: ”SE1792300000092384036254”,
```

”bban”: ”92384036254”,
”currency”: ”SEK”,
”product”: ”Lönekonto”,
”status”: ”enabled”,
”bic”: ”MARGSES1”,
”usage”: ”PRIV”,
”details”: ”Per Olsson”,
”balances”: [],
”_links”: {
"balances": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts/92384036254/balances",
"transactions": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts/92384036254/transactions"
}
},
{
”resourceId”: ”92350752216”,
”iban”: ”SE3092300000092350752216”,
”bban”: ”92350752216”,
”currency”: ”SEK”,
”product”: ”Sparkonto”,
”status”: ”enabled”,
”bic”: ”MARGSES1”,
”usage”: ”PRIV”,
”details”: ”Per Olsson”,
”balances”: [],
”_links”: {
"balances": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts/92350752216/balances",
"transactions": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts/92350752216/transactions"
}
},
{
”resourceId”: ”92361758679”,
”iban”: ”SE6492300000092361758679”,
”bban”: ”92361758679”,
”currency”: ”SEK”,
”product”: ” Transaktionskonto”,
”status”: ”enabled”,
”bic”: ”MARGSES1”,
”usage”: ”PRIV”,
”details”: ”Per Olsson”,
”balances”: [],
”_links”: {
"balances": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts/92361758679/balances",
"transactions": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts/92361758679/transactions"
}
}

```
  ]
}
```

5.2 READ ACCOUNT DETAILS REQUEST

This example returns detailed information for an account specified by “accountId”. As an ID the “resourceId” attribute value is used.

5.2.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts/{accountId}. An optional query parameter “withBalance” can be added which if set to “true” returns the balances for the account if the consent grants access for balances, too.

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Consent-Id	string	ID of the corresponding consent object.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

5.2.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Type	Description
account	object	Account details.
resourceId	string	Data element used in the path when retrieving data from a dedicated account.
iban	string	International Bank Account Number.
bban	string	Basic Bank Account Number.
currency	string	Account currency.
product	string	Product Name of the Bank for this account, proprietary definition.
status	string	Account status.
bic	string	The BIC associated to the account.

usage	string	Specifies the usage of the account.
details	string	PSU name - the name of the PSU that initiated the request through the TPP
balances	list	A list of balances regarding this account.
_links	object	Links to the account, which can be directly used for retrieving account information from this dedicated account.

EXAMPLE


```
{
   "resourceId": "92376185378",
   "iban": "SE5492300000092376185378",
   "bban": "92376185378",
   "currency": "SEK",
   "product": "Konto",
   "status": "enabled",
   "bic": "MARGSES1",
   "usage": "PRIV",
   "details": "Sara Svensson",
   "balances": [
      {
         "balanceAmount": {
            "currency": "SEK",
            "amount": "1121.0"
         },
         "balanceType": "interimAvailable",
         "creditLimitIncluded": false,
         "lastChangeDateTime": "2024-05-23T07:27:42.438Z"
      },
      {
         "balanceAmount": {
            "currency": "SEK",
            "amount": "0.0"
         },
         "balanceType": "nonInvoiced",
         "creditLimitIncluded": false,
         "lastChangeDateTime": "2024-05-23T07:27:42.438Z"
      }
   ],
   "_links": {
      "balances": "https://api-
sandbox.openbanking.marginalen.se/aisp/v2/accounts/92376185378/balances",
      "transactions": "https://api-
sandbox.openbanking.marginalen.se/aisp/v2/accounts/92376185378/transactions"
   }
}
```

5.3 READ BALANCE REQUEST

This example returns balances for a dedicated account specified with “accountId”. As an ID the “resourceId” attribute value is used.

5.3.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts/{accountId}/balances

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Consent-Id	string	ID of the corresponding consent object.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

5.3.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Parameter of	Type	Description
account		object	Account details.
bban	account	string	Basic Bank Account Number
balances		list	List of balances
balanceAmount	balance	object	A single balance element
currency	balanceAmount	string	ISO 4217 Alpha 3 currency code
amount	balanceAmount	string	The amount.
balanceType	balance	string	The type of balance.
creditLimitIncluded	balance	boolean	A flag indicating if the credit limit of the corresponding account is included in the calculation of the balance, where applicable.
lastChangeDateTime	balance	string	This data element might be used to indicate e.g. with the expected or booked balance that no action is known on the account, which is not yet booked.

EXAMPLE


```
{
  ”account”: {
    ”bban”: ”92384036254”,
    ”currency”: ”SEK”
  },
  ”balances”: [
    {
      ”balanceAmount”: {
        ”currency”: ”SEK”,
        ”amount”: ”1122.0”
      },
      ”balanceType”: ”interimAvailable”,
      ”creditLimitIncluded”: false,
      ”lastChangeDateTime”: ”2019-09-05T09:23:07.375Z”
    },
    {
      ”balanceAmount”: {
        ”currency”: ”SEK”,
        ”amount”: ”0.0”
      },
      ”balanceType”: ”nonInvoiced”,
      ”creditLimitIncluded”: false,
      ”lastChangeDateTime”: ”2019-09-05T09:23:07.375Z”
    }
  ]
}
```


5.4 READ TRANSACTION LIST

This example returns the account data from a given account addressed by “accountId”.

5.4.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts/{accountId}/transactions?bookingStatus=booked. The “bookingStatus” query parameter with value “booked” is mandatory. Other possible values are “pending” and “both” and these are optional.

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Consent-Id	string	ID of the corresponding consent object.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.

TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

5.4.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Parameter of	Type	Description
account		object	Account details.
currency	account	string	Account currency
transactions		object	Arrays of booked and pending transactions.
transactionId	transaction	string	ID of the transaction.
bookingDate	transaction	string	The Date when an entry is posted to an account on the books at Marginalen Bank.
valueDate	transaction	date	The date at which assets become available to the account owner in case of a credit.
transactionAmount	transaction	object	
currency	transactionAmount	string	ISO 4217 Alpha 3 currency code.
amount	transactionAmount	string	The amount.
creditorName	transaction	string	Name of the creditor if a ”Debited” transaction.
creditorAccount	transaction	object	Account of the creditor.
debtorAccount	transaction	object	Account of the debtor.

EXAMPLE


```
{
  ”account”: {
    ”bban”: ”92384036254”,
    ”currency”: ”SEK”
  },
  ”transactions”: {
    ”booked”: [
      {
        ”transactionId”: ”5d78ec8b7e6c3e2dcf54279e”,
        ”bookingDate”: ”2019-09-11”,
```

```
            "valueDate": "2019-09-11",
            "transactionAmount": {
                "currency": "SEK",
                "amount": "1.0"
            },
            "creditorName": "testing linux",
            "creditorAccount": {
                "bban": "92384036254"
            },
            "debtorAccount": {
                "bban": "92320872078"
            }
        },
        {
            "transactionId": "5d89f6867e6c3e2dcf55a23b",
            "bookingDate": "2019-09-24",
            "valueDate": "2019-09-24",
            "transactionAmount": {
                "currency": "SEK",
                "amount": "78.0"
            },
            "creditorName": "testing sandbox",
            "creditorAccount": {
                "bban": "92384036254"
            },
            "debtorAccount": {
                "bban": "92307490663"
            }
        },
        {
            "transactionId": "5d89fd16cc810536079bec31",
            "bookingDate": "2019-09-24",
            "valueDate": "2019-09-24",                "transactionAmount": {
                "currency": "SEK",
                "amount": "78.0"
            },
            "creditorName": "testing sca flows giro",
            "creditorAccount": {
                "bban": "92384036254"
            },
            "debtorAccount": {
                "bban": "92307490663"
            }
        }
    ],
    "pending": [],
    "_links": {
        "first": "https://api-
sandbox.openbanking.marginalen.se/aisp/v2/accounts/92384036254/transactions?bookingStatus=both"
    }
```

```
  }
}
```

5.5 READ TRANSACTION DETAILS

This example returns transaction details from a given transaction addressed by “transactionId” on a given account addressed by ”accountId”.

5.5.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/accounts/{accountId}/transactions/{transactionId}

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Consent-Id	string	ID of the corresponding consent object.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

5.5.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Same as in (5.4.2).

EXAMPLE


```
{
  ”transactionDetails”: {
    ”transactionId”: ”5d78ec8b7e6c3e2dcf54279e”,
    ”bookingDate”: ”2019-09-11”,
    ”valueDate”: ”2019-09-11”,
    ”transactionAmount”: {
      ”currency”: ”SEK”,
      ”amount”: ”1.0”
    },
    ”creditorName”: ”testing linux”,
    ”creditorAccount”: {
      ”bban”: ”92384036254”
    },
    ”debtorAccount”: {
```

```
        "bban": "92320872078"
      }
    }
}
```


6 CARD-ACCOUNTS ENDPOINT EXAMPLES

6.1 READ CARD ACCOUNT LIST REQUEST

This example returns a list of card accounts to which an account access has been granted to through the consents endpoint by the PSU.

6.1.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/card-accounts

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Consent-Id	string	ID of the corresponding consent object.
Digest	string	Is contained if and only if the "Signature" element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

6.1.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Parameter of	Type	Description
cardAccounts		list	List of card accounts
resourceId	cardAccount	string	Data element used in the path when retrieving data from a dedicated account
maskedPan	cardAccount	string	Primary Account Number (PAN) of a card in a masked form.
currency	cardAccount	string	ISO 4217 Alpha 3 currency code
name	cardAccount	string	Name of the account given by the bank or the PSU in online-banking.

product	cardAccount	string	Product Name of the Bank for this account, proprietary definition
status	cardAccount	string	Account status.
usage	cardAccount	string	Specifies the usage of the account
details	cardAccount	string	PSU name - the name of the PSU that initiated the request through the TPP
creditLimit	cardAccount	object	Defines the credit limit of the PSU for all cards related to this card account in total.
currency	creditLimit	string	ISO 4217 Alpha 3 currency code
amount	creditLimit	string	The amount.
balances	cardAccount	list	The specific card account balances associated to the card accounts.
_links	cardAccount	object	Links to the account, which can be directly used for retrieving account information from the account

EXAMPLE


```
{
  ”cardAccounts”: [
    {
      ”resourceId”: ”5d70d3fb0a92bc05893afec2”,
      ”maskedPan”: ”504**********074”,
      ”currrency”: ”SEK”,
      ”name”: ””,
      ”product”: ”Marginalen Traveller”,
      ”status”: ”enabled”,
      ”usage”: ”PRIV”,
      ”details”: ”Olle Pettersson”,
      ”creditLimit”: {
        ”currency”: ”SEK”,
        ”amount”: ”20000.0”
      },
      ”balances”: [
        {
          ”balanceAmount”: {
            ”currency”: ”SEK”,
            ”amount”: ”0.0”
          },
          ”balanceType”: ”interimAvailable”,
          ”creditLimitIncluded”: false,
          ”lastChangeDateTime”: ”2019-09-05T09:23:07.376Z”
        },
        {
          ”balanceAmount”: {
            ”currency”: ”SEK”,
            ”amount”: ”0.0”
          },
          ”balanceType”: ”nonInvoiced”,
          ”creditLimitIncluded”: false,
          ”lastChangeDateTime”: ”2019-09-05T09:23:07.376Z”
```

```
            }
        ],
        "_links": {
            "balances": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/card-
accounts/5d70d3fb0a92bc05 893afec2/balances",
            "transactions": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/card-
accounts/5d70d3fb0a92bc05893afec2/transactions"
        }
    },
    {
        "resourceId": "5d70d3fb0a92bc05893afec3",
        "maskedPan": "209**********731",
        "currrency": "SEK",
        "name": "",
        "product": "Marginalen Hammarby",
        "status": "enabled",
        "usage": "PRIV",
        "details": "Olle Pettersson",
        "creditLimit": {
            "currency": "SEK",
            "amount": "30000.0"
        },
        "balances": [
            {
                "balanceAmount": {
                    "currency": "SEK",
                    "amount": "0.0"
                },
                "balanceType": "interimAvailable",
                "creditLimitIncluded": false,
                "lastChangeDateTime": "2019-09-05T09:23:07.377Z"
            },
            {
                "balanceAmount": {
                    "currency": "SEK",
                    "amount": "0.0"
                },
                "balanceType": "nonInvoiced",
                "creditLimitIncluded": false,
                "lastChangeDateTime": "2019-09-05T09:23:07.377Z"
            }
        ],
        "_links": {
            "balances": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/card-
accounts/5d70d3fb0a92bc05893afec3/balances",
            "transactions": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/card-
accounts/5d70d3fb0a92bc05893afec3/transactions"
        }
    }
  ]
}
```

6.2 READ CARD ACCOUNTS DETAILS REQUEST

This method returns details about a card account.

6.2.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/card-accounts/{accountId}

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Consent-Id	string	ID of the corresponding consent object.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

6.2.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Same as in (6.1.2).

EXAMPLE


```
{
  ”resourceId”: ”5d70d3fb0a92bc05893afec2”,
  ”maskedPan”: ”504*********074”,
  ”currrency”: ”SEK”,
  ”name”: ””,
  ”product”: ”Marginalen Traveller”,
  ”status”: ”enabled”,
  ”usage”: ”PRIV”,
  ”details”: ”Lotta Andersson”,
  ”creditLimit”: {
    ”currency”: ”SEK”,
    ”amount”: ”20000.0”
  },
  ”balances”: [
    {
      ”balanceAmount”: {
        ”currency”: ”SEK”,
```

```
            "amount": "0.0"
        },
        "balanceType": "interimAvailable",
        "creditLimitIncluded": false,
        "lastChangeDateTime": "2019-09-05T09:23:07.376Z"
    },
    {
        "balanceAmount": {
            "currency": "SEK",
            "amount": "0.0"
        },
        "balanceType": "nonInvoiced",
        "creditLimitIncluded": false,
        "lastChangeDateTime": "2019-09-05T09:23:07.376Z"
    }
  ],
  "_links": {
    "balances": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/card-accounts/5d70d3fb0a92bc05893 afec2/balances",
    "transactions": "https://api-sandbox.openbanking.marginalen.se/aisp/v2/card-accounts/5d70d3fb0a92bc05 893afec2/transactions"
  }
}
```


6.3 READ CARD BALANCE REQUEST

This method returns balance information for a given card account addressed by "accountId".

6.3.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/card-accounts/{accountId}/balances

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Consent-Id	string	ID of the corresponding consent object.
Digest	string	Is contained if and only if the "Signature" element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

6.3.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Parameter of	Type	Description
cardAccount		object	Identifier of the addressed card account.
bban	cardAccount	string	Basic Bank Account Number
maskedPan	cardAccount	string	Primary Account Number (PAN) of a card in a masked form.
balances		list	List of balances for the addressed card account.

EXAMPLE


```
{
  ”cardAccount”: {
    ”maskedPan”: ”504**********074”
  },
  ”balances”: [
    {
      ”balanceAmount”: {
        ”currency”: ”SEK”,
        ”amount”: ”0.0”
      },
      ”balanceType”: ”interimAvailable”,
      ”creditLimitIncluded”: false,
      ”lastChangeDateTime”: ”2019-09-05T09:23:07.376Z”
    },
    {
      ”balanceAmount”: {
        ”currency”: ”SEK”,
        ”amount”: ”0.0”
      },
      ”balanceType”: ”nonInvoiced”,
      ”creditLimitIncluded”: false,
      ”lastChangeDateTime”: ”2019-09-05T09:23:07.376Z”
    }
  ]
}
```


6.4 READ CARD TRANSACTION LIST REQUEST

This example returns account data from a given card account addressed by “accountId” and “bookingStatus” query parameter set to “booked”.

6.4.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/aisp/v2/card-accounts/{accountId}/transactions?bookingStatus=booked. The “bookingStatus” query parameter with value “booked” is mandatory. Other possible values are “pending” and “both” and these are optional.

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Consent-Id	string	ID of the corresponding consent object.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

6.4.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Parameter of	Type	Description
cardAccount		object	Identifier of the addressed card account.
transactions		object	Arrays of booked and pending transactions for the card accounts
cardTransactionId	transaction	string	Unique end to end identity.
terminalId	transaction	string	Identification of the Terminal, where the card has been used.
transactionDate	transaction	string	Date of the actual card transaction.
bookingDate	transaction	string	Booking date of the related booking on the card account.
transactionAmount	transaction	object	The amount of the transaction as billed to the card account.
exchangeRate	transaction	string	For card accounts, only one exchange rate is used.
originalAmount	transaction	string	Original amount of the transaction at the Point of Interaction in original currency.
markupFee	transaction	string	Any fee related to the transaction in billing currency.

markupFeePercentage	transaction	string	Percentage of the involved transaction fee in relation to the billing amount.
cardAcceptorId	transaction	string	Identification of the Card Acceptor (e.g. merchant) as given in the related card transaction.
cardAcceptorAddress	transaction	object	Address of the Card Acceptor as given in the related card transaction.
cardAcceptorCategoryCode	transaction	string	Card Acceptor Category Code of the Card Acceptor as given in the related card transaction.
maskedPAN	transaction	string	The masked PAN of the card used in the transaction.
transactionDetails	transaction	string	Additional details given for the related card transactions.
invoiced	transaction	boolean	Flag indicating whether the underlying card transaction is already invoiced.
proprietaryBankTransactionCode	transaction	string	Proprietary bank transaction code as used within a community or within Marginalen Bank.
balances		list	List of balances for the card accounts.
_links		list	A list of hyperlinks to be recognised by the TPP.

EXAMPLE


```
{
  ”cardAccount”: {
    ”maskedPan”: ”504**********074”
  },
  ”transactions”: {
    ”booked”: [
      {
        ”cardTransactionId”: ”5d70d3fb0a92bc05893afec6”,
        ”transactionDate”: ”2019-09-05”,
        ”bookingDate”: ”2019-09-05”,
        ”transactionAmount”: {
          ”currency”: ”SEK”,
          ”amount”: ”999.15”
        },
        ”cardAcceptorAddress”: {
          ”city”: ”Stockholm”,
```

```
        "country": "SE"
    },
    "maskedPAN": "504**********074",
    "transactionDetails": "7-Eleven",
    "invoiced": true,
    "proprietaryBankTransactionCode": "PURCHASE"
},
{
    "cardTransactionId": "5d70d3fb0a92bc05893afec7",
    "transactionDate": "2019-09-05",
    "bookingDate": "2019-09-05",
    "transactionAmount": {
        "currency": "SEK",
        "amount": "12553.67"
    },
    "cardAcceptorAddress": {
        "city": "Stockholm",
        "country": "SE"
    },
    "maskedPAN": "504**********074",
    "transactionDetails": "7-Eleven",
    "invoiced": true,
    "proprietaryBankTransactionCode": "PURCHASE"
},
{
    "cardTransactionId": "5d70d3fb0a92bc05893afec8",
    "transactionDate": "2019-09-05",
    "bookingDate": "2019-09-05",
    "transactionAmount": {
        "currency": "SEK",
        "amount": "704.63"
    },
    "cardAcceptorAddress": {
        "city": "Stockholm",
        "country": "SE"
    },
    "maskedPAN": "504**********074",
    "transactionDetails": "7-Eleven",
    "invoiced": true,
    "proprietaryBankTransactionCode": "PURCHASE"
},
{
    "cardTransactionId": "5d70d3fb0a92bc05893afec9",
    "transactionDate": "2019-09-05",
    "bookingDate": "2019-09-05",
    "transactionAmount": {
        "currency": "SEK",
        "amount": "1405.45"
    },
    "cardAcceptorAddress": {
        "city": "Stockholm",
```

```
        "country": "SE"
    },
    "maskedPAN": "504**********074",
    "transactionDetails": "7-Eleven",
    "invoiced": true,
    "proprietaryBankTransactionCode": "PURCHASE"
},
{
    "cardTransactionId": "5d70d3fb0a92bc05893afeca",
    "transactionDate": "2019-09-05",
    "bookingDate": "2019-09-05",
    "transactionAmount": {
        "currency": "SEK",
        "amount": "1836.19"
    },
    "cardAcceptorAddress": {
        "city": "Stockholm",
        "country": "SE"
    },
    "maskedPAN": "504**********074",
    "transactionDetails": "7-Eleven",
    "invoiced": true,
    "proprietaryBankTransactionCode": "PURCHASE"
},
{
    "cardTransactionId": "5d70d3fb0a92bc05893afecb",
    "transactionDate": "2019-09-05",
    "bookingDate": "2019-09-05",
    "transactionAmount": {
        "currency": "SEK",
        "amount": "64.55"
    },
    "cardAcceptorAddress": {
        "city": "Stockholm",
        "country": "SE"
    },
    "maskedPAN": "504**********074",
    "transactionDetails": "7-Eleven",
    "invoiced": true,
    "proprietaryBankTransactionCode": "PURCHASE"
},
{
    "cardTransactionId": "5d70d3fb0a92bc05893afecc",
    "transactionDate": "2019-09-05",
    "bookingDate": "2019-09-05",
    "transactionAmount": {
        "currency": "SEK",
        "amount": "15740.31"
    },
    "cardAcceptorAddress": {
        "city": "Stockholm",
```

```
        "country": "SE"
    },
    "maskedPAN": "504**********074",
    "transactionDetails": "7-Eleven",
    "invoiced": true,
    "proprietaryBankTransactionCode": "PURCHASE"
},
{
    "cardTransactionId": "5d70d3fb0a92bc05893afecd",
    "transactionDate": "2019-09-05",
    "bookingDate": "2019-09-05",
    "transactionAmount": {
        "currency": "SEK",
        "amount": "5762.82"
    },
    "cardAcceptorAddress": {
        "city": "Stockholm",
        "country": "SE"
    },
    "maskedPAN": "504**********074",
    "transactionDetails": "7-Eleven",
    "invoiced": true,
    "proprietaryBankTransactionCode": "PURCHASE"
},
{
    "cardTransactionId": "5d70d3fb0a92bc05893afece",
    "transactionDate": "2019-09-05",
    "bookingDate": "2019-09-05",
    "transactionAmount": {
        "currency": "SEK",
        "amount": "4514.26"
    },
    "cardAcceptorAddress": {
        "city": "Stockholm",
        "country": "SE"
    },
    "maskedPAN": "504**********074",
    "transactionDetails": "7-Eleven",
    "invoiced": true,
    "proprietaryBankTransactionCode": "PURCHASE"
},
{
    "cardTransactionId": "5d70d3fb0a92bc05893afecf",
    "transactionDate": "2019-09-05",
    "bookingDate": "2019-09-05",
    "transactionAmount": {
        "currency": "SEK",
        "amount": "2676.68"
    },
    "cardAcceptorAddress": {
        "city": "Stockholm",
```

```
            "country": "SE"
          },
          "maskedPAN": "504**********074",
          "transactionDetails": "7-Eleven",
          "invoiced": true,
          "proprietaryBankTransactionCode": "PURCHASE"
        }
      ],
      "pending": [],
      "_links": {
        "first": "https://api-
sandbox.openbanking.marginalen.se/aisp/v2/accounts/5d70d3fb0a92bc05893afec2/transactions?bookingStatus=both"
      }
    }
}
```


7 PAYMENTS ENDPOINT EXAMPLES

The following API calls are examples of Swedish domestic credit transfers type of payment product. Another supported type of payment product is Swedish domestic giro payments. Essentially the API calls differ only in the URLs for all but the payment initiation request. An example of the payment initiation request using Swedish domestic giro payment is given in section 7.8.

7.1 PAYMENT INITIATION REQUEST

This example creates a payment initiation request at Marginalen Bank for a Swedish domestic credit transfer type of payment product. The chosen SCA approach in this example is explicit decoupled.

7.1.1 REQUEST

METHOD

The method is POST at: https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers

HEADERS

Attribute	Type	Description
Content-Type		application/json
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
PSU-ID	string	Client ID of the PSU at Marginalen Bank client interface.
PSU-IP-Address	string	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP.
Digest	string	Is contained if and only if the "Signature" element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.

Date	string	Date in RFC 1123 date format.

Additional HTTP request parameter for payment initiation is needed which defines the authorisation preference for the payment initiation request.

Attribute	Type	Description
TPP-Explicit-Authorisation-Preferred	boolean	If it equals ”true”, the TPP prefers to start the authorisation process separately. If it equals ”false” or if the parameter is not used, there is no preference of the TPP. This especially indicates that the TPP assumes a direct authorisation of the transaction in the next step. Currently, “true” is the only supported value.

In the example this parameter is set to “true” implying explicit decoupled SCA approach.

PARAMETERS

Name	Type	Description
remittanceInformationUnstructured	string	Unstructured remittance information
debtorAccount	object	Account of the debtor identified with BBAN.
instructedAmount	object	The amount for the payment
creditorAccount	object	Account of the creditor identified with BBAN.
creditorName	string	Name of the creditor.

EXAMPLE

```
{
   ”remittanceInformationUnstructured”: ”unstructured remittance”,
   ”debtorAccount”: {
      ”bban”: ”92329115652”
   },
   ”instructedAmount”: {
      ”currency”: ”SEK”,
      ”amount”: ”78”
   },
   ”creditorAccount”: {
      ”bban”: ”92343333530”
   },
   ”creditorName”: ”Testing sandbox”,
   ”requestedExecutionDate”:”2019-09-24”
}
```

7.1.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

Location	string	Location of the created resource (if created).
ASPSP-SCA-Approach	string	Possible values: DECOUPLED

PARAMETERS

Name	Parameter of	Type	Description
transactionStatus		string	The status of the transaction.
paymentId		string	Resource identification of the generated payment initiation resource.
transactionFeeIndicator		boolean	If equals true, the transaction will involve specific transaction cost as shown by Marginalen Bank in its public price list or as agreed between Marginalen Bank and PSU. If equals false, the transaction will not involve additional specific transaction costs to the PSU.
_links		object	A list of hyperlinks to be recognised by the TPP.
startAuthorisationWithPsuIdentification	_links	string	The link to the authorisation endpoint, where the authorisation sub-resource has to be generated while uploading the PSU identification data.
self	_links	string	The link to the payment resource created by this request. This link can be used to retrieve the resource data.
status	_links	string	The link to retrieve the status of the payment resource.

EXAMPLE


```
{
   ”transactionStatus”: ”RCVD”,
   ”paymentId”: ”5d8a32e41b42612a37ed65f0”,
   ”transactionFeeIndicator”: false,
   ”_links”: {
      ”startAuthorisationWithPsuIdentification”: ”https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/5d8a32e41b42612a37ed65f0/authorisations”,
      ”self”: ”https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/5d8a32e41b42612a37ed65f0”,
      ”status”: ”https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/5d8a32e41b42612a37ed65f0/status”
   }
}
```

7.2 START THE AUTHORISATION PROCESS FOR A PAYMENT INITIATION

This example creates an authorisation sub-resource and start the authorisation process for the payment initiation request from the previous example.

7.2.1 REQUEST

METHOD

The method is POST with empty body at: https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/{paymentId}/authorisations

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
PSU-ID	string	Client ID of the PSU at Marginalen Bank client interface.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

7.2.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
ASPSP-SCA-Approach	string	Possible values: DECOUPLED

PARAMETERS

Name	Parameter of	Type	Description
scaStatus		string	The status of the SCA routine.
scaMethods		Array of Authentication Objects	An array of possible methods for SCA.
authenticationType	scaMethod	string	An array of possible methods for SCA.
authenticationVersion	scaMethod	string	Depending on the ”authenticationType”. This version can be used by differentiating authentication tools used within performing OTP generation in the same authentication type.

authenticationMethodId	scaMethod	string	An identification provided by Marginalen Bank for the later identification of the authentication method selection.
name	scaMethod	string	This is the name of the authentication method defined by the PSU in the Online Banking frontend of Marginalen Bank.
explanation	scaMethod	string	Detailed information about the SCA method for the PSU
_links		object	A list of hyperlinks to be recognised by the TPP.
selectAuthenticationMethod	_links	string	The link to the authorisation sub-resource, where the selected authentication method needs to be update.
scaStatus		string	The link to retrieve the scaStatus of the corresponding authorisation sub-resource
authorisationId		string	Unique resource identification of the created authorisation sub-resource

EXAMPLE


```
{
  ”scaStatus”: ”psuIdentified”,
  ”authorisationId”: ”5d8a33281b42612a37ed65f1”,
  ”scaMethods”: [
      {
        ”authenticationType”: ”MobileBankId”,
        ”authenticationVersion”: ”MobileBankId.2”,
        ”authenticationMethodId”: ”MobileBankId2”,
        ”name”: ”MobileBankId2”,
        ”explanation”: ” An SCA method, where the PSU will be redirected to a mobile BankID
application on same device to approve the authorisation. To redirect the PSU to their BankID
application, the link startAuthorisationWithAutoStartToken is to be used. This link can be found in the
_links property.”
      },
      {
        ”authenticationType”: ”MobileBankIdOnOtherDevice”,
        ”authenticationVersion”: ”MobileBankIdOnOtherDevice.2”,
        ”authenticationMethodId”: ”MobileBankIdOnOtherDevice2”,
        ”name”: ”MobileBankIdOnOtherDevice2”,
        ”explanation”: ” An SCA method, decoupled, where the PSU will need to open the mobile
BankID application manually and scan a QR code to approve the authorisation. The QR code can be
retrieved from the imageLink in the challengeData property.”
      }
  ],
```

```
  "_links": {
    "scaStatus": "https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/5d8a32e41b42612a37ed65f0/authorisations/5d8a33281b42612a37ed65f1",
    "selectAuthenticationMethod": "https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/5d8a32e41b42612a37ed65f0/authorisations/5d8a33281b42612a37ed65f1"
  }
}
```


7.3 UPDATE PSU DATA FOR PAYMENT INITIATION

This example updates PSU data of the payment initiation request. After sending this call, the next step would be for the PSU to sign the request using the BankID application on their mobile device. See details regarding the signing flow in section 3. After signing the payment initiation request the status of the created payment resource should change the initial "RCVD" status.

7.3.1 REQUEST

METHOD

The method is PUT at: https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/{paymentId}/authorisations/{authorisationId}

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
PSU-ID	string	Client ID of the PSU at Marginalen Bank client interface.
Digest	string	Is contained if and only if the "Signature" element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

PARAMETERS

Name	Type	Description
authenticationMethodId	string	An identification provided by Marginalen Bank for the later identification of the authentication method

EXAMPLE


```
{
  "authenticationMethodId": " MobileBankIdOnOtherDevice2"
}
```


7.3.2 RESPONSE

HEADERS

Attribute	Type	Description

X-Request-Id	string	Unique ID of the request as determined by the initiating party.
ASPSP-SCA-Approach	string	Possible values: DECOUPLED

PARAMETERS

Name	Parameter of	Type	Description
_links		object	A list of hyperlinks to be recognised by the TPP.
scaStatus	_links	string	The link to retrieve the scaStatus of the corresponding authorisation sub-resource.
scaStatus		string	The status of the SCA routine.
psuMessage		string	Text to be displayed to the PSU.
chosenScaMethod		object	The chosen SCA method as sent in the request body in the call.
challengeData		object	Challenge data needed for SCA.
imageLink	challengeData	string	A link where Marginalen Bank will provide the challenge image for the TPP.

EXAMPLE

{
"_links": {
"scaStatus": "https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/5d8a32e41b42612a37ed65f0/authorisations/5d8a33281b42612a37ed65f1"
},
"scaStatus": "started",
"psuMessage": "Starta BankID-appen.",
"chosenScaMethod": {
"authenticationType": "MobileBankIdOnOtherDevice",
"authenticationVersion": "MobileBankIdOnOtherDevice.2",
"authenticationMethodId": "MobileBankIdOnOtherDevice2",
"name": "MobileBankIdOnOtherDevice2",
"explanation": " An SCA method, decoupled, where the PSU will need to open the mobile BankID application manually and scan a QR code to approve the authorisation. The QR code can be retrieved from the imageLink in the challengeData property."
},
"challengeData": {
"imageLink": "https://authenticationservicev2.marginalen.se/Sandbox-QRCode/image?parameters=DYxWEovfkeBlALs7ET8sMD4QPfTdGklfXvv301-PJI4lDZ-pAv2uq6lh9z_c5YaXFauDTIDIdcWIiEGwJ2M01VkPyJDLDa0KNNcFNWU4hdrnQxs4KSRXTT3bUesWsnlw101hVAsnhFjy1AP2JMmc_4iSTeXvM8mT_KkosXL2Ugdl57E-suhMN_kFrJI2xUOCLasX0TemB7S76p_XbvjznU2UyfVXYlUGpfHmnvYS6Y5iV5QplF_c0mg-w2aa95JKAjQRp14vH0m0GPQuIDr18G82WGfZNDJ34XTuzq9L0ELEbbWQ-6_hgDtvZBseaHcFNorrNdZXSNIIRPddz0lg1yeoa1IvMZJSj2ubRoDz1LUmneOnwBx8IeFCa9SjObKfN4LC43BrsgLY3kmCq5biVm6YZQX-ZK0ak-BLRsXSMXJmN9uOk6FAdZ63xlzVwGaUeUAhqmc0A1PhOZUOTNhlK1z4qCzqGsQ3VwWSc7IholVi

aM0XXXCBF6fJ9IkEyuRFTrV86g56gAC4CiFHCV3Ak59o8y5vCw4JSc-8Mgi-6BjrAYG8D_u4qW_DoMsjJaZ4XCjFdJFXfuY9FjqSiMtx0gbP5caiwf8FJi4WBRrCFihQ2DmF7W3jYpmwDijjI97muB6Um28iQJ_e206uA30iTPfFcfVM670nChyb3geYbRg”
  }
}

7.4 READ THE SCA STATUS OF THE PAYMENT AUTHORISATION

This example returns the SCA status of the payment initiation’s authorisation sub-resource.

7.4.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/{paymentId}/authorisations/{authorisationId}

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

7.4.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Type	Description
scaStatus	string	The status of the SCA routine.

EXAMPLE

{
  ”scaStatus”: ”finalised”
}

7.5 PAYMENT INFORMATION REQUEST

This example returns the content of a payment object.

7.5.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/{paymentId}

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

7.5.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

As described in (7.1).

EXAMPLE


```
{
   ”transactionStatus”: ”ACSC”,
   ”paymentId”: ”5d8a32e41b42612a37ed65f0”,
   ”debtorAccount”: {
      ”bban”: ”92307490663”
   },
   ”instructedAmount”: {
      ”currency”: ”SEK”,
      ”amount”: ”78.0”
   },
   ”creditorAccount”: {
      ”bban”: ”92343333530”
   },
   ”creditorName”: ”Testing sandbox”,
   ”remittanceInformationUnstructured”: ”unstructured remittance”,
   ”requestedExecutionDate”: ”2019-09-24”
}
```

7.6 PAYMENT CANCELLATION REQUEST

This example initiates a cancellation of a payment.

7.6.1 REQUEST

METHOD

The method is DELETE at: https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/{paymentId}

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

7.6.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PARAMETERS

Name	Type	Description
transactionStatus	string	The status of the transaction.
_links	string	A list of hyperlinks to be recognised by the TPP.
scaMethods	array of authentication objects	This data element might be contained, if SCA is required and if the PSU has a choice between different authentication methods.

EXAMPLE

```
{
  ”transactionStatus”: ”CANC”,
  ”_links”: {},
  ”scaMethods”: []
}
```

7.7 PAYMENT INITIATION STATUS REQUEST

This example checks the status of a payment initiation.

7.7.1 REQUEST

METHOD

The method is GET at: https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-credit-transfers/{paymentId}/status

HEADERS

Attribute	Type	Description
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

7.7.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

EXAMPLE

```
{
   ”transactionStatus”: ”ACSC”,
}
```

7.8 PAYMENT INITIATION REQUEST FOR SWEDISH DOMESTIC GIRO PAYMENT PRODUCT

This example creates a payment initiation request at Marginalen Bank for a Swedish domestic giro payment type of payment product. The chosen SCA approach in this example is explicit decoupled.

7.8.1 REQUEST

METHOD

The method is POST at: https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-giro-payments

HEADERS

Attribute	Type	Description
Content-Type		application/json
Authorization	string	Access token.
X-Request-Id	string	Unique ID of the request as determined by the initiating party.

PSU-ID	string	Client ID of the PSU at Marginalen Bank client interface.
PSU-IP-Address	string	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP.
Digest	string	Is contained if and only if the ”Signature” element is contained in the header of the request.
Signature	string	A signature of the request by the TPP on application level.
TPP-Signature-Certificate	string	The certificate used for signing the request, in base64 encoding. Must be contained if a signature is contained.
Date	string	Date in RFC 1123 date format.

Additional HTTP request parameter for payment initiation is needed which defines the authorisation preference for the payment initiation request.

Attribute	Type	Description
TPP-Explicit-Authorisation-Preferred	boolean	If it equals ”true”, the TPP prefers to start the authorisation process separately. If it equals ”false”, there is no preference of the TPP. This especially indicates that the TPP assumes a direct authorisation of the transaction in the next step. Currently, “true” is the only supported value.

In the example the parameter is set to “true” implying explicit decoupled SCA approach.

PARAMETERS

Name	Type	Description
remittanceInformationStructured	object	Structured remittance information.
debtorAccount	object	Account of the debtor identified with BBAN.
instructedAmount	object	The amount for the payment
creditorAccount	object	Reference to an account using PlusGiro. Other possible value is BankGiro – “bg”.
creditorName	string	Name of the creditor.
requestedExecutionDate	string	The date when the payment will be executed.

EXAMPLE

```
{
  ”remittanceInformationStructured”: {
    ”reference”: ”stringRefer”
  },
```

```
  ”debtorAccount”: {
    ”bban”: ”92366550480”
  },
  ”instructedAmount”: {
    ”currency”: ”SEK”,
    ”amount”: ”17”
  },
  ”creditorAccount”: {
    ”pg”: ”92307252738”
  },
  ”creditorName”: ”testing sca flows giro”,
  ”requestedExecutionDate”: ”2019-07-31”
}
```


7.8.2 RESPONSE

HEADERS

Attribute	Type	Description
X-Request-Id	string	Unique ID of the request as determined by the initiating party.
Location	string	Location of the created resource (if created).
ASPSP-SCA-Approach	string	Possible values: DECOUPLED

PARAMETERS

As described in (7.1.2).

EXAMPLE


```
{
  ”transactionStatus”: ”RCVD”,
  ”paymentId”: ”5d4171c73bf4b130bbc2f975”,
  ”transactionFeeIndicator”: false,
  ”_links”: {
    "startAuthorisationWithPsuIdentification": "https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-giro-payments/5d4171c73bf4b130bbc2f975/authorisations",
    ”self”: ”https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-giro-payments/5d4171c73bf4b130bbc2f975”,
    ”status”: ”https://api-sandbox.openbanking.marginalen.se/pisp/v2/payments/swedish-domestic-giro-payments/5d4171c73bf4b130bbc2f975/status”
  }
}
```


8 ENVIRONMENTS

The sandbox environment has been used when creating these examples. Below follows the base URLs for the different environments:

- Sandbox AISP: https://api-sandbox.openbanking.marginalen.se/aisp/v2
- Sandbox: PISP: https://api-sandbox.openbanking.marginalen.se/pisp/v2
- Production AISP: https://api.openbanking.marginalen.se/aisp/v2
- Production PISP: https://api.openbanking.marginalen.se/pisp/v2

CONTINGENCY MECHANISM AND CORPORATE ACCOUNTS

For creating services towards our corporate accounts and in the case where the dedicated interface for consumer accounts does not perform in compliance with its obligations, screen scraping or reverse engineering the banks own customer facing channels may be used.

A third party provider (TPP) making use of the fallback/regular interface must authenticate themselves using Mutual Transport Layer Security (mTLS) by presenting a valid QWAC certificate and sending their requests through a reverse proxy dedicated to this purpose.

See the API blueprints for details on accessing the fallback interface and corporate accounts in the regular customer interface.

Support for the fallback/regular corporate customer interface can be reached at marginalen-support@qinshift.com.